

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An apparatus for processing a substrate, comprising:

a plurality of lift pins that cause causing the substrate to move up and down;

a first lifting mechanism that causes causing the plurality of lift pins to move up and down;

a heating plate which performs performing a heating process on onto the substrate, having a plurality of holes allowing causing the plurality of lift pins to protrude and sink there-through to a surface facing the substrate;

a lid having an inside portion and an outside portion, being disposed above the heating plate so that the inside portion faces the heating plate, and capable of moving up and down;

a second lifting mechanism that causes causing the lid to move up and down;

a first inert gas introducing mechanism that introduces introducing a first inert gas to the inside portion of the lid; and

a second inert gas introducing mechanism that introduces introducing a second inert gas onto the surface of the heating plate through the plurality of holes; and

a first controlling mechanism that introduces the second inert gas onto the surface of the heating plate using the second inert gas introducing mechanism while the first inert gas is being introduced into the inside portion of the lid using the first inert gas introducing mechanism in a state that both the lid and the plurality of lift pins are lifted up.

Claim 2 (Canceled).

Claim 3 (Currently Amended): The apparatus as set forth in claim 1, further comprising:

a first adjusting mechanism that causes causing a temperature of the first and the second inert gas to be lower than that of the substrate on the heating plate during the heating process.

Claim 4 (Currently Amended): The apparatus as set forth in claim 1, further comprising:

a second controlling mechanism that causes causing an amount of the first gas introduced into the inside portion of the lid to be larger than that of the second inert gas while the lid moves up and down.

Claim 5 (Currently Amended): The apparatus as set forth in claim 1, further comprising:

a pressure measuring portion that measures measuring pressure in the inside portion of the lid;

an exhaust mechanism that exhausts exhausting the first inert gas in the inside portion of the lid; and

a second adjusting mechanism that adjusts adjusting the amount of the first inert gas introduced into and exhausted from the inside portion of the lid according to the value measured with the pressure measuring portion, so that the pressure in the inside portion of the lid becomes constant.

Claim 6 (Currently Amended): The apparatus as set forth in claim 5, further comprising:

a third adjusting mechanism that adjusts adjusting the amount of the first inert gas introduced into and exhausted from the inside portion of the lid just before the lid moves up and down from the heating plate, so that the pressure in the inside portion of the lid becomes higher than an atmospheric pressure.

Claim 7 (Currently Amended): The apparatus as set forth in claim 6, further comprising:

a third controlling mechanism that causes causing a temperature of the second inert gas to be higher than that of the first inert gas introduced into the inside portion of the lid; and an upward and downward movement controlling mechanism that causes causing the lid to move down so that a lower end of the lid becomes approximately the same level as a surface of the substrate while the plurality of lift pins move up holding the substrate, then causes causing the plurality of lift pins to move down simultaneously with the lid being positioned at approximately the same level as the surface of the substrate.

Claim 8 (Original): The apparatus as set forth in claim 7, further comprising:

a gas guiding member being provided around the top end of at least one of the plurality of lift pins, being folded when the plurality of lift pins sink into the plurality of holes, and being unfolded when the lift pins protrude through the heating plate so that the second inert gas introduced through the plurality of holes is guided along the surface of the heating plate.

Claim 9 (New): An apparatus for processing a substrate, comprising:

a plurality of lift pins that cause the substrate to move up and down;

a first lifting mechanism that causes the plurality of lift pins to move up and down;

a heating plate which performs a heating process on the substrate, having a plurality of holes allowing the plurality of lift pins to protrude and sink there-through to a surface facing the substrate;

a lid having an inside portion and an outside portion, being disposed above the heating plate so that the inside portion faces the heating plate, and capable of moving up and down;

a second lifting mechanism that causes the lid to move up and down;

a first inert gas introducing mechanism that introduces a first inert gas to the inside portion of the lid;

a second inert gas introducing mechanism that introduces a second inert gas onto the surface of the heating plate through the plurality of holes; and

a first adjusting mechanism that causes a temperature of the first and the second inert gas to be lower than that of the substrate on the heating plate during the heating process.

Claim 10 (New): The apparatus as set forth in claim 9, further comprising:

a second controlling mechanism that causes an amount of the first inert gas introduced into the inside portion of the lid to be larger than that of the second inert gas while the lid moves up and down.

Claim 11 (New): The apparatus as set forth in claim 9, further comprising:

a pressure measuring portion that measures pressure in the inside portion of the lid;

an exhaust mechanism that exhausts the first inert gas in the inside portion of the lid;
and

a second adjusting mechanism that adjusts the amount of the first inert gas introduced into and exhausted from the inside portion of the lid according to the value measured with the pressure measuring portion, so that the pressure in the inside portion of the lid becomes constant.

Claim 12 (New): The apparatus as set forth in claim 11, further comprising:

a third adjusting mechanism that adjusts the amount of the first inert gas introduced into and exhausted from the inside portion of the lid just before the lid moves up and down from the heating plate, so that the pressure in the inside portion of the lid becomes higher than an atmospheric pressure.

Claim 13 (New): The apparatus as set forth in claim 12, further comprising:

a third controlling mechanism that causes a temperature of the second inert gas to be higher than that of the first inert gas introduced into the inside portion of the lid; and
an upward and downward movement controlling mechanism that causes the lid to move down so that a lower end of the lid becomes approximately the same level as a surface of the substrate while the plurality of lift pins move up holding the substrate, then causes the plurality of lift pins to move down simultaneously with the lid being positioned at approximately the same level as the surface of the substrate.

Claim 14 (New): The apparatus as set forth in claim 13, further comprising:

a gas guiding member being provided around the top end of at least one of the plurality of lift pins, being folded when the plurality of lift pins sink into the plurality of

holes, and being unfolded when the lift pins protrude through the heating plate so that the second inert gas introduced through the plurality of holes is guided along the surface of the heating plate.

Claim 15 (New): An apparatus for processing a substrate, comprising:

a plurality of lift pins that cause the substrate to move up and down;

a first lifting mechanism that causes the plurality of lift pins to move up and down;

a heating plate which performs a heating process on the substrate, having a plurality of holes allowing the plurality of lift pins to protrude and sink there-through to a surface facing the substrate;

a lid having an inside portion and an outside portion, being disposed above the heating plate so that the inside portion faces the heating plate, and capable of moving up and down;

a second lifting mechanism that causes the lid to move up and down;

a first inert gas introducing mechanism that introduces a first inert gas to the inside portion of the lid;

a second inert gas introducing mechanism that introduces a second inert gas onto the surface of the heating plate through the plurality of holes; and

a second controlling mechanism that causes an amount of the first inert gas introduced into the inside portion of the lid to be larger than that of the second inert gas while the lid moves up and down.

Claim 16 (New): The apparatus as set forth in claim 15, further comprising:

a pressure measuring portion that measures pressure in the inside portion of the lid;

an exhaust mechanism that exhausts the first inert gas in the inside portion of the lid;

and

a second adjusting mechanism that adjusts the amount of the first inert gas introduced into and exhausted from the inside portion of the lid according to the value measured with the pressure measuring portion, so that the pressure in the inside portion of the lid becomes constant.

Claim 17 (New): The apparatus as set forth in claim 16, further comprising:

a third adjusting mechanism that adjusts the amount of the first inert gas introduced into and exhausted from the inside portion of the lid just before the lid moves up and down from the heating plate, so that the pressure in the inside portion of the lid becomes higher than an atmospheric pressure.

Claim 18 (New): The apparatus as set forth in claim 17, further comprising:

a third controlling mechanism that causes a temperature of the second inert gas to be higher than that of the first inert gas introduced into the inside portion of the lid; and

an upward and downward movement controlling mechanism that causes the lid to move down so that a lower end of the lid becomes approximately the same level as a surface of the substrate while the plurality of lift pins move up holding the substrate, then causes the plurality of lift pins to move down simultaneously with the lid being positioned at approximately the same level as the surface of the substrate.

Claim 19 (New): The apparatus as set forth in claim 18, further comprising:

a gas guiding member being provided around the top end of at least one of the plurality of lift pins, being folded when the plurality of lift pins sink into the plurality of

holes, and being unfolded when the lift pins protrude through the heating plate so that the second inert gas introduced through the plurality of holes is guided along the surface of the heating plate.

Claim 20 (New): An apparatus for processing a substrate, comprising:

a plurality of lift pins that cause the substrate to move up and down;

a first lifting mechanism that causes the plurality of lift pins to move up and down;

a heating plate which performs a heating process on the substrate, having a plurality of holes allowing the plurality of lift pins to protrude and sink there-through to a surface facing the substrate;

a lid having an inside portion and an outside portion, being disposed above the heating plate so that the inside portion faces the heating plate, and capable of moving up and down;

a second lifting mechanism that causes the lid to move up and down;

a first inert gas introducing mechanism that introduces a first inert gas to the inside portion of the lid;

a second inert gas introducing mechanism that introduces a second inert gas onto the surface of the heating plate through the plurality of holes;

a pressure measuring portion that measures pressure in the inside portion of the lid;

an exhaust mechanism that exhausts the first inert gas in the inside portion of the lid;

and

a second adjusting mechanism that adjusts the amount of the first inert gas introduced into and exhausted from the inside portion of the lid according to the value measured with the pressure measuring portion, so that the pressure in the inside portion of the lid becomes constant.

Claim 21 (New): The apparatus as set forth in claim 20, further comprising:

a third adjusting mechanism that adjusts the amount of the first inert gas introduced into and exhausted from the inside portion of the lid just before the lid moves up and down from the heating plate, so that the pressure in the inside portion of the lid becomes higher than an atmospheric pressure.

Claim 22 (New): The apparatus as set forth in claim 21, further comprising:

a third controlling mechanism that causes a temperature of the second inert gas to be higher than that of the first inert gas introduced into the inside portion of the lid; and
an upward and downward movement controlling mechanism that causes the lid to move down so that a lower end of the lid becomes approximately the same level as a surface of the substrate while the plurality of lift pins move up holding the substrate, then causes the plurality of lift pins to move down simultaneously with the lid being positioned at approximately the same level as the surface of the substrate.

Claim 23 (New): The apparatus as set forth in claim 22, further comprising:

a gas guiding member being provided around the top end of at least one of the plurality of lift pins, being folded when the plurality of lift pins sink into the plurality of holes, and being unfolded when the lift pins protrude through the heating plate so that the second inert gas introduced through the plurality of holes is guided along the surface of the heating plate.